Undergraduate Mentoring in Environmental Biology (UMEB)

National Science Foundation
Division of Biological Infrastructure
Directorate for Biological Sciences

Full Proposal Deadline(s) (due by 5 p.m. proposer's local time):

October 31, 2003

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Undergraduate Mentoring in Environmental Biology (UMEB)

Synopsis of Program:

This program is designed to enable institutions to create programs that will encourage undergraduate students, especially those from under-represented groups, to pursue a career in environmental biology. In FY2004, the Directorate for Biological Sciences has significantly modified the nature of the program. UMEB still supports Research-Mentoring projects that provide year-round support for undergraduate students to gain research experience in biological sciences related to the environment. Unlike previous years, planning grants are no longer supported and there is no deadline for submission of travel grants.

All projects should emphasize factors that encourage and enable members of under-represented groups to enter and remain in environmental biology, as broadly defined in the Program Solicitation.

Cognizant Program Officer(s):

- Sally E. O'Connor, Program Director, Directorate for Biological Sciences, Division of Biological Infrastructure, 615 N, telephone: (703) 292-8470, email: soconnor@nsf.gov

Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):

- 47.074 --- Biological Sciences

Eligibility Information

- **Organization Limit:** None Specified.
- **PI Eligibility Limit:**

  Although there are no PI Eligibility Limits, please see Section III of this Solicitation for Student Eligibility Limits.

- **Limit on Number of Proposals:** None Specified.

Award Information

- **Anticipated Type of Award:** Standard or Continuing Grant
- **Estimated Number of Awards:** 5 to 8 - See Section IV of this Solicitation
- **Anticipated Funding Amount:** $2,000,000 subject to the availability of funds.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Full Proposal Preparation Instructions:** This solicitation contains information that supplements the standard Grant Proposal Guide (GPG) proposal preparation guidelines. Please see the full text of this solicitation for further information.

B. Budgetary Information

- **Cost Sharing Requirements:** Cost Sharing is not required.
- **Indirect Cost (F&A) Limitations:**

  In lieu of indirect costs, an administrative allowance of up to 25% of the student stipend (only) is allowed.

- **Other Budgetary Limitations:** Not Applicable.

C. Due Dates

- **Full Proposal Deadline Date(s)** (due by 5 p.m. proposer's local time):
  October 31, 2003

Proposal Review Information

- **Merit Review Criteria:** National Science Board approved criteria apply.

Award Administration Information

- **Award Conditions:** Standard NSF award conditions apply.

- **Reporting Requirements:** Additional reporting requirements apply. Please see the full text of this solicitation for further information.

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I. INTRODUCTION

The National Science Foundation (NSF) is charged with ensuring the vitality of the nation's scientific and technological enterprise. NSF's mandate requires a focus on the quality, distribution and effectiveness of the human-resource base in science and engineering, including full utilization of all potentially interested and qualified persons. Because members of certain groups are under-represented in the science, mathematics and engineering workforce, the Foundation and its Directorate for Biological Sciences (BIO) support efforts directed toward increasing their numbers as full participants in the scientific workforce.

In the area of environmental biology, the under-representation of certain groups is especially severe. In order to address this issue, BIO is soliciting proposals under the Undergraduate Mentoring in Environmental Biology (UMEB) program. The UMEB program is designed to enhance research participation, and access to careers, in environmental biology (as broadly defined below) by undergraduate students, particularly those from under-represented groups. For the purpose of this solicitation, these groups include women, persons with disabilities, and members of those racial and ethnic groups under-represented in science, mathematics and engineering: Native Americans (American Indians and Alaskan Natives), Blacks (African Americans), Native Pacific Islanders (Polynesians or Micronesians), and Hispanics (Latinos).

Also for the purpose of this solicitation, "environmental biology" is broadly defined to include areas of research focusing on organisms as they evolve, interact with each other, and/or interact with their environment, from perspectives that range from molecular to ecosystem levels. BIO encourages proposals that include research themes in behavior, ecology, ecosystems, ecological physiology, evolutionary biology, population biology, and/or systematics, as well as proposals in other areas that address themes in animal, plant, or microbial biology with environmental emphases. For example, studies of how an organism perceives and responds to environmental cues, or symbiotic interactions in a microenvironment, would be included in the UMEB definition of "environmental biology". Proposed projects must include some aspect of field research. The theme of the project should be in areas typically funded by NSF's Directorate for Biological Sciences. The proposed research and training activities should not have biomedical or veterinary medicine goals.

Information about UMEB projects and related topics can be found on the website of NSF's Directorate for Biological Sciences at: http://www.nsf.gov/bio/progdes/umeb.htm. This information is updated each year, and prospective applicants are encouraged to consult it before preparing UMEB proposals.

II. PROGRAM DESCRIPTION

Research-Mentoring projects are invited under this program solicitation. The intent of this activity is to provide support to enable institutions to create innovative programs that will encourage students to pursue a career in environmental biology. Activities supported by the program include research and field experiences in environmental biology (as defined above), enhancement activities that will prepare students for a scientific career including graduate studies, and mentoring activities that will ensure the successful completion of students in the program. The applicant institution is expected to foster an enriched and intellectually stimulating research and educational environment. Proposed projects should involve year-round mentoring and include a major emphasis on direct student participation in research. Student participants will receive an annual stipend and funds for travel and research supplies.

Research activities should span the academic year and summer, with individual students continuing in the program for more than one year. Projects should emphasize factors that encourage and enable members of under-represented groups to enter and remain in environmental biology, as broadly defined above. The Directorate for Biological Sciences (BIO) particularly encourages UMEB proposals from minority-serving institutions such as Historically Black Colleges and Universities (HBCU), Tribal Colleges, Hispanic-Serving Institutions (HSI), and community colleges. Collaborations between these institutions and research universities or institutions are also encouraged, in order to enhance the research environment for the students. Projects may include international research activities in which students would conduct research at field sites or at institutions abroad and benefit from collaborations with international scientists. Activities that involve UMEB students in K-12 classrooms, or the involve K-12 science teachers in some aspects of the UMEB program, are allowed, if appropriate, as part of research mentoring proposals.

Planning grants for the purpose of preparing UMEB proposals are no longer supported by the program. Travel grants are still supported under UMEB; however, these proposals are not expected to be submitted by the deadline date indicated under this solicitation. Professional societies and individuals on behalf of societies are encouraged to seek funds through the existing NSF mechanisms (GPG II.D.7) to actively engage the participation of under-represented groups at the society's meeting or conference.

Conference or workshop proposals submitted by a professional society or on behalf of a society are accepted under this solicitation. There is no deadline for submission. The goal of this activity is to increase the participation of undergraduates from under-represented groups in national and regional scientific meetings. The proposal should describe activities that include active participation of students in the meeting including presentation of research results, special group workshops that develop students' professional skills, and opportunities for designated student mentors to help orient students to the meeting and initiate student-mentor relationships that would help students in their career choices. Proposals should include a letter of endorsement from the governing body of the professional organization as a demonstration of commitment by the organization. Include letter of endorsement in "Supplementary Documentation."

III. ELIGIBILITY INFORMATION

Eligible Student Participants: **Undergraduate student participants supported with NSF funds must be citizens or permanent**

residents of the United States or its possessions. An undergraduate student is a student who is enrolled in a degree program (part-time or full-time) leading to a baccalaureate or associates degree. Students who are transferring from one institution to another and are enrolled at neither institution during the intervening summer may participate. High school graduates who have not yet enrolled and students who have received their bachelor's degrees and are no longer enrolled as undergraduates generally are not eligible.

IV. AWARD INFORMATION

Up to $2,000,000 will be available each year for new and continuing awards, subject to the availability of funds. Under this solicitation, new or renewal proposals may be submitted for funding amounts up to a total of $500,000 for up to 4 years. The program expects to make at least five awards each year, depending upon the quality of submissions and the availability of funds.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Full Proposal Instructions:

Proposals submitted in response to this program announcement/solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF *Grant Proposal Guide* (GPG). The complete text of the GPG is available electronically on the NSF Website at: http://www.nsf.gov/cgi-bin/getpub?gpg. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov.

(1) **Cover Sheet**. In the title of the project, include the label "UMEB: ...." The title should be indicative of the research theme of the project. For more FastLane instructions, see section D below.

(2) **Information about Principal Investigators**. A single individual should be designated clearly as Principal Investigator. This individual will be responsible for overseeing all aspects of the UMEB award. However, the institution may designate one additional person as co-principal investigator, should developing and operating the UMEB project involve such shared responsibility. Other anticipated research supervisors are listed as Senior Personnel.

(3) **Project Summary** (1-page limit). This summary should be intelligible to a general audience. **Be sure to include separate paragraphs labeled "Intellectual merit" and "Anticipated broader impacts". If the intellectual merit and anticipated broader impacts are not addressed, the proposal will be returned without review**. Provide a statement of the program goals, a brief description of the research projects and the central theme encompassing the projects, and a description of the program activities including recruitment, selection and retention of students. The project summary should include a heading with the following information: name of the host institution/organization and any other institutions/organizations involved; the major field/subfields that describe the proposal area; a project title indicative of the research focus of the project; the number of students involved; name, telephone number and email address of the PI.

(4) **Project Description**. The project description contains the following items "a" through "g" and is not to exceed 15 pages in length.

    (a)   Results from Prior Support (if applicable). If the applicant institution has received prior support through a UMEB award, the proposal must include a section (limited in length to 5 pages) entitled Results from Prior NSF Support within the 15-page narrative description of the project. This section must describe the earlier UMEB project(s) and outcomes in sufficient detail to permit reviewers to reach an informed conclusion regarding the value of the results achieved. This will likely include results from the project evaluation; summary information on recruitment efforts and number of applicants, demographic make-up of participants and their home institutions, career choices of participants; and a list of publications or reports (if to be submitted for publication) resulting from the NSF award. For renewal applications, results from prior support will be an important factor in proposal evaluation.

(b)   Overview. Provide a brief description of the objectives of the proposed UMEB project (including the central theme of the research projects), the targeted student participants, the intellectual focus and innovative strategies, the organizational structure and timetable, and institutional commitment to the UMEB activity.

(c)   Nature of Student Activities. Proposals should address the approach to undergraduate research training being taken, and should provide detailed descriptions of examples of research projects that students will pursue. Enhancement activities that will develop the critical thinking and communication skills of the students should also be described in detail. Any other activities such as seminars, group discussions, lectures, workshops, etc. should be discussed as well as activities that will provide a cohort experience for the group. A schedule of the year-round activities should be provided, including the field experiences. The students should be expected to produce both written and oral presentations of their research project.

(d)   Field Experience. Provide a description of the field research experience in which the students will be involved. Explain how this field experience is related to the overall research project of the students and what the expected goals are for this activity. If the field experience is done at a non-lead institution, provide a letter of commitment from the institution specifying the points of contact and their affiliation with the institution. Include letter of commitment in "Supplementary Documentation."

(e)   The Research Environment and Mentoring Activities. This subsection should describe the experience and record of the involvement with undergraduate research of the Principal Investigator, the faculty who may serve as research mentors, and the institution. This should include information on the record of faculty/mentors in publishing work involving undergraduate authors and in providing professional development opportunities for student researchers. The facilities, equipment, and other resources available to support the proposed undergraduate research experiences should be described in relation to those activities. The NSF form on Facilities, Equipment, and Other Resources should be marked "See the Project Description" and the information should be included in this subsection instead.

(f) Student Recruitment and Selection. The criteria for, and overall quality of, the student recruitment and selection processes will be an important element in proposal evaluation. The recruitment plan should be described with as much specificity as possible, including the type of student targeted for the program, the extent of the pool of applicants, and the means that will be employed to recruit and attract students to the program. Mention should be made on how members of under-represented groups (ethnic minorities, women and persons with disabilities) will be recruited. Only undergraduate students who are citizens or permanent residents of the United States or its possessions can be supported with NSF funds.

(g) Project Evaluation and Reporting. This subsection should provide a plan for evaluation of the proposed project. The objective of the evaluation process is to measure qualitatively and quantitatively the success of the project in achieving its goals, particularly in terms of the degree to which students have learned and their perspectives on environmental biology been expanded. The evaluation plan is an important part of the UMEB proposal, but proposers have much latitude in designing a plan that best suits their particular project. Proposers may wish to consult the NSF on-line document, "User-friendly Handbook for Project Evaluation" (NSF 02-57), http://www.nsf.gov/pubsys/ods/getpub.cfm?nsf02057), for guidance on what makes for a good evaluation plan. Although not required, UMEB project directors may wish to engage educational research specialists from their or another institution in planning and implementing the project evaluation.

Evaluation may involve periodic measures throughout the project to ensure that it is progressing satisfactorily according to the project plan, and may involve pre- and post-project measures aimed at determining the degree of student learning that has been achieved as a result of the project. Additionally, a detailed description of a student tracking plan should be included. The plan should include a structured means of tracking participating students beyond graduation with the aim of gauging the degree to which the UMEB experience has been a lasting influence as they follow their career paths.

(5) **References Cited**. A listing of references to pertinent literature for the UMEB project must be included if available.

(6) **Biographical Sketches**. The basic GPG guidelines for biographical material apply; however, senior personnel are encouraged to include publications with undergraduate co-authors (with the student labeled by an asterisk) and other activities or accomplishments

relevant to a successful UMEB activity. Senior personnel are the principal investigator; the co-principal investigator, if one has been designated; and other faculty/professionals who are anticipated to serve as research mentors.

(7) **Project Budget**. Project costs must include student stipend as well as research supplies and/or laboratory use fees, housing (if appropriate during the summer months) and travel for student participants. The budget may also include items such as faculty salaries, support for coordination activities, and small equipment and/or supplies, as long as these are justified. An administrative allowance, limited to 25% of the participant stipend support only, is allowed for UMEB awards in lieu of indirect costs (enter in line I of the proposal budget). As a guide to budget development, students are expected to be provided an annual stipend of $12,000. Appropriate levels of supplies and travel (and housing) funds should be provided for each student participant. All student participant costs should be entered under budget item F, under participant support costs.

Special Note: A grantee may pay stipends as scholarships or wages as it determines appropriate. In either case, money received by individuals may be taxable income under the Internal Revenue Code of 1986 and may also be subject to state or local taxes.

(8) **Supplementary Documentation**. The following two additional items may be provided.

  Optional Ethics Component (limited to 3 pages). Project directors may apply for support of ethics in science or engineering activities in a UMEB project. The proposal for an ethics component, entered as Supplementary Documentation, should describe the following: 1) ethics issues or topics that relate to the scientific content of the project and/or to issues of professional conduct of research; 2) participating faculty and other individuals with appropriate credentials in ethics, including outside ethicists as necessary; 3) activities that show how students and UMEB mentors will be engaged in ethics discussions designed to present ethics concepts and skills for resolution of ethical issues, using approaches such as seminars, student presentations and reports, role-playing, case studies, and outside speaker presentations; 4) products such as reports, presentations, and web-based materials; 5) a formative evaluation plan to be used to improve the component; and 6) results from any prior support for an ethics component.

Project directors may apply for up to $4,000 each year in support of ethics activities in a UMEB project. Up to 25% of the direct costs requested for this component may be budgeted as an administrative allowance, but the yearly total requested for ethics activities may not exceed $4,000. A separate budget sheet is not possible in FastLane. The total ethics budget is placed under item G.6. (Other Direct Costs) in the Budget Page, but must be itemized in the budget justification, with a total shown for the items plus administrative allowance equal to the amount indicated in item G.6. of the Budget Page.

Letters of Commitment. Signed letters of commitment documenting collaborative arrangements of significance to the proposal should be scanned and placed in this section. Letters may be relevant where the awardee and performing organizations are different, where faculty or facilities of more than one institution are to be employed, or where international activities are arranged. Letters of endorsement from the governing body of a professional organization may also be included here.

Proposers are reminded to identify the program announcement/solicitation number (03-585) in the program announcement/solicitation block on the proposal Cover Sheet. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

B. Budgetary Information

Cost Sharing:

Cost sharing is not required in proposals submitted under this Program Solicitation.

Indirect Cost (F&A) Limitations:

In lieu of indirect costs, an administrative allowance of up to 25% of the student stipend (only) is allowed.

C. Due Dates

Proposals must be submitted by the following date(s):

Full Proposal Deadline(s) (due by 5 p.m. proposer's local time):

October 31, 2003

D. FastLane Requirements

Proposers are required to prepare and submit all proposals for this announcement/solicitation through the FastLane system. Detailed instructions for proposal preparation and submission via FastLane are available at: http://www.fastlane.nsf.gov/a1/newstan.htm. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail fastlane@nsf.gov. The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this program announcement/solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this announcement/solicitation.

Submission of Electronically Signed Cover Sheets. The Authorized Organizational Representative (AOR) must electronically sign the proposal Cover Sheet to submit the required proposal certifications (see Chapter II, Section C of the Grant Proposal Guide for a listing of the certifications). The AOR must provide the required electronic certifications within five working days following the electronic submission of the proposal. Proposers are no longer required to provide a paper copy of the signed Proposal Cover Sheet to NSF. Further instructions regarding this process are available on the FastLane Website at: http://www.fastlane.nsf.gov

VI. PROPOSAL REVIEW INFORMATION

A. NSF Proposal Review Process

Reviews of proposals submitted to NSF are solicited from peers with expertise in the substantive area of the proposed research or education project. These reviewers are selected by Program Officers charged with the oversight of the review process. NSF invites the proposer to suggest, at the time of submission, the names of appropriate or inappropriate reviewers. Care is taken to ensure that reviewers have no conflicts with the proposer. Special efforts are made to recruit reviewers from non-academic institutions, minority-serving institutions, or adjacent disciplines to that principally addressed in the proposal.

The National Science Board approved revised criteria for evaluating proposals at its meeting on March 28, 1997 (NSB 97-72). All NSF proposals are evaluated through use of the two merit review criteria. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

On July 8, 2002, the NSF Director issued Important Notice 127, Implementation of new Grant Proposal Guide Requirements Related to the Broader Impacts Criterion. This Important Notice reinforces the importance of addressing both criteria in the preparation and review of all proposals submitted to NSF. NSF continues to strengthen its internal processes to ensure that both of the merit review criteria are addressed when making funding decisions.

In an effort to increase compliance with these requirements, the January 2002 issuance of the GPG incorporated revised proposal preparation guidelines relating to the development of the Project Summary and Project Description. Chapter II of the GPG specifies that Principal Investigators (PIs) must address both merit review criteria in separate statements within the one-page Project Summary. This chapter also reiterates that broader impacts resulting from the proposed project must be addressed in the Project Description and described as an integral part of the narrative.

Effective October 1, 2002, NSF will return without review proposals that do not separately address both merit review criteria within the Project Summary. It is believed that these changes to NSF proposal preparation and processing guidelines will more clearly articulate the importance of broader impacts to NSF-funded projects.

The two National Science Board approved merit review criteria are listed below (see the Grant Proposal Guide Chapter III.A for further information). The criteria include considerations that help define them. These considerations are suggestions and not all will apply to any given proposal. While proposers must address both merit review criteria, reviewers will be asked to address only those

considerations that are relevant to the proposal being considered and for which he/she is qualified to make judgments.

What is the intellectual merit of the proposed activity?
How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

What are the broader impacts of the proposed activity?
How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

NSF staff will give careful consideration to the following in making funding decisions:

Integration of Research and Education
One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learning perspectives.

Integrating Diversity into NSF Programs, Projects, and Activities
Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

B. Review Protocol and Associated Customer Service Standard

All proposals are carefully reviewed by at least three other persons outside NSF who are experts in the particular field represented by the proposal. Proposals submitted in response to this announcement/solicitation will be reviewed by Ad Hoc and/or panel review.

Reviewers will be asked to formulate a recommendation to either support or decline each proposal. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

A summary rating and accompanying narrative will be completed and submitted by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, are sent to the Principal Investigator/Project Director by the Program Director. In addition, the proposer will receive an explanation of the decision to award or decline funding.

NSF is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. The time interval begins on the date of receipt. The interval ends when the Division Director accepts the Program Officer's recommendation.

In all cases, after programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements for review of business, financial, and policy implications and the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

VII. AWARD ADMINISTRATION INFORMATION

A. Notification of the Award

Notification of the award is made to *the submitting organization* by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program Division administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See section VI.A. for additional information on the review process.)

B. Award Conditions

An NSF award consists of: (1) the award letter, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award letter; (4) the applicable award conditions, such as Grant General Conditions (NSF-GC-1); * or Federal Demonstration Partnership (FDP) Terms and Conditions * and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreement awards also are administered in accordance with NSF Cooperative Agreement Terms and Conditions (CA-1). Electronic mail notification is the preferred way to transmit NSF awards to organizations that have electronic mail capabilities and have requested such notification from the Division of Grants and Agreements.

*These documents may be accessed electronically on NSF's Website at http://www.nsf.gov/home/grants/grants_gac.htm. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov.

More comprehensive information on NSF Award Conditions is contained in the NSF *Grant Policy Manual* (GPM) Chapter II, available electronically on the NSF Website at http://www.nsf.gov/cgi-bin/getpub?gpm. The GPM is also for sale through the Superintendent of Documents, Government Printing Office (GPO), Washington, DC 20402. The telephone number at GPO for subscription information is (202) 512-1800. The GPM may be ordered through the GPO Website at http://www.gpo.gov.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the PI must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period.

The project report should include a list of student participants and their level of academic education, major field of study, title of research project, name of faculty mentor and a brief description of research accomplishments. Results of the recruitment and selection efforts should be described in detail, including demographic information on the applicant and participant groups. Data for the project report should feed into the project evaluation plan, which in turn should address the project's success in meeting its goals.

Within 90 days after the expiration of an award, the PI also is required to submit a final project report. Failure to provide final technical reports delays NSF review and processing of pending proposals for the PI and all Co-PIs. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF's electronic project reporting system, available through FastLane, for preparation and submission of annual and final project reports. This system permits electronic submission and updating of project reports, including information on project participants (individual and organizational), activities and findings, publications, and other specific products and contributions. PIs will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system.

VIII. CONTACTS FOR ADDITIONAL INFORMATION

General inquiries regarding this program should be made to:

- Sally E. O'Connor, Program Director, Directorate for Biological Sciences, Division of Biological Infrastructure, 615 N, telephone: (703) 292-8470, email: soconnor@nsf.gov

For questions related to the use of FastLane, contact:

- Nicole S Harris, Science Assistant, Directorate for Biological Infrastructure, BIO/NSF, telephone: 703-292-8470, fax: 703-292-9063, email: biofl@nsf.gov

IX. OTHER PROGRAMS OF INTEREST

The NSF *Guide to Programs* is a compilation of funding for research and education in science, mathematics, and engineering. The NSF *Guide to Programs* is available electronically at http://www.nsf.gov/cgi-bin/getpub?gp. General descriptions of NSF programs, research areas, and eligibility information for proposal submission are provided in each chapter.

Many NSF programs offer announcements or solicitations concerning specific proposal requirements. To obtain additional information about these requirements, contact the appropriate NSF program offices. Any changes in NSF's fiscal year programs occurring after press time for the *Guide to Programs* will be announced in the NSF E-Bulletin, which is updated daily on the NSF Website at http://www.nsf.gov/home/ebulletin, and in individual program announcements/solicitations. Subscribers can also sign up for NSF's Custom News Service (http://www.nsf.gov/home/cns/start.htm) to be notified of new funding opportunities that become available.

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) funds research and education in most fields of science and engineering. Awardees are wholly responsible for conducting their project activities and preparing the results for publication. Thus, the Foundation does not assume responsibility for such findings or their interpretation.

NSF welcomes proposals from all qualified scientists, engineers and educators. The Foundation strongly encourages women, minorities and persons with disabilities to compete fully in its programs. In accordance with Federal statutes, regulations and NSF policies, no person on grounds of race, color, age, sex, national origin or disability shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving financial assistance from NSF, although some programs may have special requirements that limit eligibility.

Facilitation Awards for Scientists and Engineers with Disabilities (FASED) provide funding for special assistance or equipment to enable persons with disabilities (investigators and other staff, including student research assistants) to work on NSF-supported projects. See the GPG Chapter II, Section D.2 for instructions regarding preparation of these types of proposals.

The National Science Foundation promotes and advances scientific progress in the United States by competitively awarding grants and cooperative agreements for research and education in the sciences, mathematics, and engineering.

To get the latest information about program deadlines, to download copies of NSF publications, and to access abstracts of awards, visit the NSF Website at http://www.nsf.gov

- **Location:** 4201 Wilson Blvd. Arlington, VA 22230

- **For General Information** (NSF Information Center)**:** (703) 292-5111

- **TDD (for the hearing-impaired):** (703) 292-5090 or (800) 281-8749

- **To Order Publications or Forms:**

  Send an e-mail to: pubs@nsf.gov

  or telephone: (703) 292-7827

- **To Locate NSF Employees:** (703) 292-5111